

PATENT ABSTRACTS OF JAPAN

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B41M 5/26

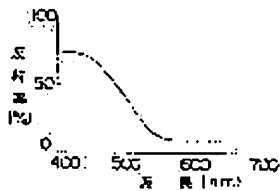
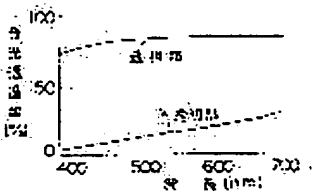
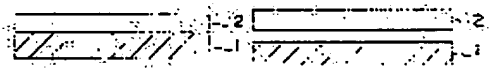
(21)Application number : 61-182666 (71)Applicant : RICOH CO LTD
(22)Date of filing : 05.08.1986 (72)Inventor : HOTTA YOSHIHIKO
KUBO TAKASHI

(54) REVERSIBLE THERMAL RECORDING MATERIAL

(57)Abstract:

PURPOSE: To form a high-contrast sharp image which has a high chemical and weather proofness (light fastness) and is also provided with a development layer of a coloring sheet of a specific color under a thermal layer or a thermal sheet as an ideal one for display or electron blackboard by applying the thermal layer or thermal sheet of resin W organic low molecular substance.

CONSTITUTION: When any light in the range of wavelengths of 400 W 700nm is projected, a thermal layer or a thermal sheet 2 which consists mainly of a resin material and an organic low molecular material dispersed in said resin material and shows a reversibly changing transparency depending on temperature is combined separately from or integrally with a sheet or a layer 1 which is tinted in a color of wavelengths 400 W 500nm absorbing at least 50% of a reflected light. A pigment or a dye is selected so that when a light in the range of wavelengths 400 W 700nm is projected, a color developing layer or a color developing sheet shows a color in the range of wavelengths 400 W 500nm absorbing at least 50% of the reflected light. As resin materials used for the thermal layer or thermal sheet, polyvinyl chloride, silicon resin, etc. are used. In addition, the preferable organic low molecular substance is such as having a melting point of 30 W 200°C, especially approx. 50 W 150°C.



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PATENT ABSTRACTS OF JAPAN

(11)Publication number : 63-041186
(43)Date of publication of application : 22.02.1988

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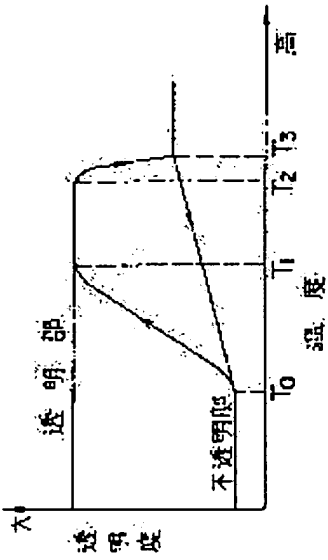
(21)Application number : 61-185829 (71)Applicant : RICOH CO LTD
(22)Date of filing : 06.08.1986 (72)Inventor : KUBO TAKASHI
HOTTA YOSHIHIKO

(54) REVERSIBLE THERMAL RECORDING MATERIAL

(57)Abstract:

PURPOSE: To obtain a reversible thermal recording material capable of forming a high contrast image and easy to control temp., by containing a metal salt of higher fatty acid in a thermal layer.

CONSTITUTION: In a reversible thermal recording material based on a resin base material and the org. low-molecular substance dispersed in said resin base material and having a thermal layer reversibly changing in its transparency dependent of temp., a metal salt of higher fatty acid is further contained in the thermal layer. When the metal salt of higher fatty acid is added to the thermal layer, the org. low-molecular substance dispersed in the resin base material generates an eutectic phenomenon at the time of heating and the transparentizing temp. range T1WT2 of the thermal layer is widened. Further, when the thermal layer is heated to temp. of T3 or more and cooled to ambient temp. of T0 or less to be made opaque, the growth of the crystal of the org. low-molecular substance is suppressed in the presence of the metal salt of higher fatty acid and a gathering state of fine crystals is obtained, and as a result, the light scattering of said part increases and, therefore, whiteness increases and contrast is enhanced.



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(21)Application number : 10-210348

(71)Applicant : GUNZE LTD

(22)Date of filing : 08.07.1998

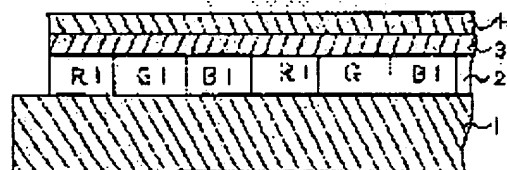
(72)Inventor : TONOI KAZUTO
TANAKA AKIHIRO
OKAMOTO TOSHINORI

(54) THERMAL REVERSIBLE MULTI-COLOR RECORDING MEDIUM

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a thermal reversible multi-color recording medium, prominent in the quality of a picture and high in utility.

SOLUTION: A heat reversible multi-color recording layer 2 of two colors or more (red, blue and green, for example) is arranged on a substrate 1 with a regular arraying pattern and a near infrared ray absorbing layer 3, absorbing near infrared ray from laser beam and whose principal constituent is a near infrared ray absorbing agent having a molar absorptivity of 20000 or more (preferably immonium base perchlorate), is laminated on the whole surface of the recording layer. Further, a transparent protecting layer 4 is provided on the whole surface of the absorbing layer 3 to protect the same from external hazard. Obtained thermal reversible multi-color recording medium is suitable especially for laser writing and is utilized practically in the form of combination with various kinds of advertisement mediums, various kinds of cards and the like.



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(21)Application number : 11-335947

(71)Applicant : MATSUSHITA ELECTRIC IND CO LTD

(22)Date of filing : 30.08.1991

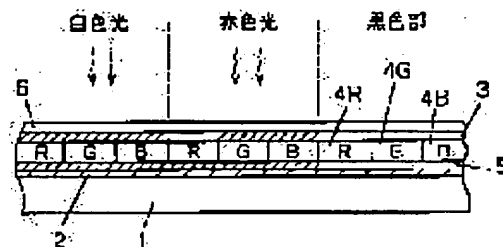
(72)Inventor : KISHIMOTO YOSHIO
SUZUKI MASAOKI

(54) REWRITABLE RECORDING MEDIUM AND METHOD FOR RECORDING IT

(57)Abstract:

PROBLEM TO BE SOLVED: To allow multicolor recording by using a reversible heat-sensitive recording material changing in a transparency.

SOLUTION: When an overall recording layer is clarified by heating of a first heating mode, a colored layer 4 is developed in colors of a red part 4R, a green part 4G and a blue part 4B, but since recording layers 3, 5 are transparent, a transmitted light is absorbed by a light absorption layer 2, and hence it exhibits black when it is observed from a surface protective layer 6 side. Meanwhile, when a light of a color image is emitted, the layer 4 absorbs a light except the transmitted lights of themselves to rise at its temperature. The layers 3, 5 near the layer 4 are turned whitish by a temperature rise of this second heating mode, and it conceals the color of the layer 4. Since a part emitted with a red light does not, for example, absorb a light only in the part 4R, the layer 3 on the part 4R is held as it is, but the red light transmitting the part 4R is absorbed by the layer 2 directly under the colored layer of the red part 4R, the layer 2 of this part is temperature raised, received by a change of the second heating mode, and hence the layer 5 turns whitish.



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